

Abstract:

The present invention relates to a process for preparing an optical waveguide component from acrylate/titanium alkoxide composite material, which is characterized by using an acid-free sol-gel process to prepare a precursor solution of acrylate/ titanium alkoxide composite film, then coating the precursor solution on a silicon wafer then drying, and producing the optical waveguide component having channels by using a lithography process.

The present invention also relates to an optical waveguide component of acrylate/ titanium alkoxide composite material, the material has excellent transparency and plateness and its refractive index varies with the amount of titanium alkoxide contained therein. When an optical waveguide component is prepared from the component at a near-infrared ray will reduce to less than 0.7 dB/cm and therefore is advantageously waveguide component for optical communication element.